

ORDINANCE NO. 13-2004

**AN ORDINANCE AMENDING PART II, ARTICLE VI
OF THE ZONING ORDINANCE OF THE CITY OF VALPARAISO
REGARDING REQUIREMENTS FOR STORM
DRAINAGE AND FLOODPLAINS**

WHEREAS, the City of Valparaiso has adopted a Zoning Ordinance concerning requirements for storm drainage and floodplains within the jurisdiction of the City, such Zoning Ordinance addresses the requirements and limitations placed on all property owners concerning storm drainage and floodplain requirements; and

WHEREAS, it has come to the attention of the Valparaiso Plan Commission that certain amendments are required in order to assure compliance with the requirements of the State of Indiana, Department of Natural Resources, and the National Flood Insurance Program; and

WHEREAS, the Plan Commission duly advertised and held a public hearing on the proposed amendments; and

WHEREAS, the Plan Commission voted unanimously to recommend approval of the amendment.

NOW, THEREFORE, BE IT ORDAINED by the Common Council of the City of Valparaiso that Part II, Article VI of the Zoning Ordinance of the City of Valparaiso should be and the same is hereby amended to read as follows:

The aforementioned amendment is attached hereto and made apart hereof as Exhibit "A".

PASSED by the Common Council of the City of Valparaiso, Indiana, by a _____ vote of all members present and voting this _____ day of April, 2004.

Jon Costas, Mayor

ATTEST:

Sharon Swihart, Clerk-Treasurer

Presented by me to the Mayor of the City of Valparaiso, Indiana, this _____ day of _____, 2004, at _____ o'clock __.m.

Sharon Swihart, Clerk-Treasurer

This Ordinance approved and signed by me this _____ day of _____, 2004, at _____ o'clock __.m.

Jon Costas, Mayor

ORDINANCE NO. 13-2004
APPENDIX A

Part II
Article VI

REQUIREMENTS FOR STORM DRAINAGE AND FLOODPLAINS

STATUTORY AUTHORIZATION

The Indiana Legislature granted the power to local units of government (IC 36-7-4) to control land use within their jurisdictions in order to accomplish the following.

Section 600 Storm Water Runoff Control

601. General

The purpose to this section is to provide for the adequate control of storm water runoff so that certain natural resources are preserved and the quality of the water and the health, safety and welfare of the residents is not compromised.

Any new development, or construction, addition or renovation requiring a building permit from the City, shall provide storm water runoff controls as provided herein. Appropriate reference shall be made to the latest revision of the “Specifications and Standards for Acceptance of Municipal Improvements” for specific requirements.

602. Definitions: For purposes of this article, the following words and phases shall have the meanings indicate below:

- A. Board - The Board of Public Works and Safety of the City of Valparaiso.
- B. By-pass - a channel formed in the topography of the surface of the earth to carry storm water runoff through or around a specific area.
- C. City Engineer - The City Engineer of the City of Valparaiso or his authorized representative.
- D. Commission - The Planning Commission of the City of Valparaiso.
- E. Common swale or ditch - A swale or ditch that conveys runoff from sties with multiple ownerships.
- F. Detention Basin - A structure or area of land that is configured to temporarily store a portion of the runoff from a site. The basin has a discharge control structure that allows all of the stored runoff to drain away to a drainage course.
- G. Detention Basin, dry bottom - A detention basin that is designed to drain completely dry.
- H. Detention Basin, wet bottom - A detention basin that is designed to permanently contain a volume of water below the storage volume.
- I. Discharge - The water released from a detention basin, drainage course or pump.
- J. Discharge Control Structure - A structure that, by virtue of its size and/or its configuration, controls or regulates the rate of flow through it.
- K. Discharge Rate - The flow rate of the water released from a detention basin, drainage course or pump.
- L. Drainage Calculations - The mathematical calculation and supporting data required for the analysis and/or design of drainage course and/or detention basins.

- M. Drainage Control Measure - The combinations of grading, swales, ditches, sewers, detention basins, etc. that are proposed to be used to control the runoff from and/or through a site.
- N. Drainage Course - A sewer, swale or ditch that conveys runoff.
- O. Drainage Plan - A drawing showing the drainage control measure to be provided on a site. The drainage calculations, when required, shall be included as a part of the drainage plan.
- P. Groundwater Recharge - The process of returning water to the aquifer underlying the site.
- Q. Pass Through Runoff - The runoff that enters the site from other locations in the tributary watershed.
- R. Retention Basin - A structure or area of land that is designed to store a portion of the runoff from a site, has no discharge control structure, and relies on evaporation, transpiration and percolation to remove the stored runoff.
- S. Runoff - That portion of rainfall or pump discharge that is not taken up by vegetation, absorbed into the ground, or evaporated.
- T. Standards - The latest revision of the City of Valparaiso's "Specifications and Standards for Acceptance of Municipal Improvements."
- U. Storage Volume - The volume of storage provided in a detention or retention basin.
- V. Tributary Watershed - The entire area that contributes runoff to a point.

603. Drainage Plans Required:

Drainage plans are required for all activities covered under paragraph 601 above. All drainage plans must be approved by the City Engineer before permits are issued or formal approvals granted. Said approval by the City Engineer shall mean that the plan appears to meet the requirements of the City and shall not be interpreted to provide any guarantee or warranty against damage or inconvenience by flooding or the runoff relate problem.

A. Individual One and Two Unit Residential Sites:

By virtue of applying for a building permit the applicant acknowledges that he is familiar with the characteristics of the site and the lands adjacent and that the stormwater control measures proposed are appropriate for those characteristics and the proposed house.

Drainage plans may be shown on a sketch prepared by the applicant. It should be drawn as accurately as possible and clearly show all the stormwater control measures proposed for the site. Arrows may be used to show the direction of surface flow. Locations of swales, downspouts and sump pump discharges should be shown with their direction of flow. Specific elevations are not required.

B. Multiple Units Residential, Commercial, and Industrial Sites:

Drainage plans and drainage calculations shall be prepared by a Registered Professional Engineer, Land Surveyor, Architect or Landscape Architect licensed to practice in the State of Indiana. Drainage plans and drainage calculations for sites over three (3) acres in size, or with unique and/or sensitive drainage issues shall be prepared by a Registered Professional Engineer or Land Surveyor licensed to practice in the State of Indiana. The designer of the drainage plan shall be liable for any shortcomings or inadequacies in the plan that may reveal themselves after construction.

Drainage plans shall show topographic features, utilities, and locations and existing and proposed elevations of the ground, pavements, drainage course, drainage structures, detention basins, finished floors, and other items that might impact drainage. The drainage plan shall

be of sufficient detail to serve as construction drawings and may be incorporated with the site plans required under other sections of this ordinance or other ordinances of the City.

Drainage calculations shall be provided for the analysis of existing drainage courses and/or the design of any proposed drainage course and/or detention basin and discharge control structures. The calculations shall be in a form and shall use methods as required by the City Engineer and as spelled out in the Standards.

The drainage plan and calculations shall be thorough enough to allow a complete analysis of the expected impacts on the site and the areas downstream.

- C. Subdivisions, condominium developments, and Planned Unit Developments (PUD):
Reference should be made to the appropriate sections of this ordinance or other appropriate ordinances of the City.

Drainage plans shall comply with the requirements of paragraph B above. The drainage plan shall be presented in concept at the pre-preliminary review stage of the City's approvals process. If the concept is approved the drainage plan shall be presented in sufficient detail at the Primary Plat stage to be able to make sound judgments concerning the adequacy of the proposed system. The drainage plan shall be presented in final form prior to the Secondary Plat (or equivalent) stage. The drainage plan and drainage calculations must be approved by the City Engineer prior to, or simultaneous with, the approval of any construction plans.

604. Regulations:

General requirements for drainage follow. More specific requirements are per the Standards.

A. Two systems provided

Whenever drainage control measures are proposed or considered, two systems shall be provided, the Minor System and the Major System.

1. Minor System - The minor system shall be designed to convey the runoff from the more frequently experienced rainfall events. Generally this system is designed for the storm with the ten (10) year frequency of recurrence. The system shall consist of swales, inlets, sewers and ditches.
2. Major System - The major system shall be designed to convey and manage the runoff from the least frequently experienced rainfall events. This system shall be designed for the storm with the hundred (100) year frequency of recurrence. The system shall consist of swales, inlets, sewers, ditches, and streets. It shall be designed to safely convey and manage the runoff and to minimize property damage.

B. Pass Through Runoff

All drainage plans shall accommodate the runoff that enters the site from other locations in the tributary watershed. The runoff may be diverted around the site or accommodated directly in the design of the site storm runoff control measures. In no event shall off site drainage be blocked or restricted by the proposed development.

When appropriate, and at the request of the City Engineer, the pass through runoff shall be directed through the site detention basins to provide downstream protection from the storms

with the more frequent recurrence interval. When this is required the discharge structure and overflow shall be designed to accommodate the pass through runoff.

C. Exit Characteristics

The characteristics of the runoff exiting a site shall not differ substantially after development from those that existed before development. Any runoff concentrated through the course of development into a sewer, culvert, swale or ditch shall only be discharged into a defined and established drainage course.

It may be necessary to improve the drainage course downstream from a site so that it is capable of conveying the increase runoff from the development. This maybe be necessary to handle either the rate of discharge or the duration of discharge.

D. Public and Private Systems

During the course of the planning and design of the runoff control measures it shall be determined and documented whether the measures are to be public or private.

1. Public Systems - The public system shall be maintained by the City of Valparaiso after their acceptance by the City. Generally, public systems shall be those in and/or under public streets, or those conveying the runoff from large areas of the City.
2. Private Systems - The private systems shall be privately maintained. Generally private systems shall be those in and under private streets and private sites. Rear year swales, ditches that convey the runoff from individual sites, or development detention basins constructed as runoff control measure for a development, shall be private systems.

Provisions shall be made for the maintenance of private systems. On an individual site the owner shall maintain the system. In a development a property owners association, or some other vehicle, shall be established to provide for said maintenance.

Documentation of the provisions for maintenance shall be provided to the City Engineer and accepted by him if, in his opinion they are appropriate.

If the system is not maintained so that it functions in the manner that it was designed and constructed and thereby threatens to affect or damage properties owned by others, or is not in compliance with any agreement between the owner and the City, the Board may, after notice by registered mail to the owner of the property:

1. Cause the necessary repairs to be completed. The cost of said repairs may be assessed to the property owner(s) through the City's assessment process, and/or
2. Levy a fine against the owner of the property of up to \$50.00 for each violation and/or occurrence, each day constituting a separate occurrence. The City Engineer shall provide written notification of the alleged violation and fine to the owner(s) of the property. The notice shall be delivered in person to the owner or his representative, or sent by registered mail. The administration of the procedure shall be through the City's "Local Ordinance Violations Bureau." The Board may levy a fine for each and every day that the violation is continued.

Recorded easements shall be provided over all components of public and private systems. The easements shall run to the Public and the City of Valparaiso for purposes of maintaining the facilities located in said easements. However, the establishment of said easements shall in no manner obligate the City to maintain private systems but shall, in the event of an emergency, allow the City to enter and make temporary emergency repairs to the system. The cost of said emergency repairs may be billed to the entity responsible for the maintenance of the system.

D. Individual Sites

On individual sites proposed for development the runoff control measures shall specifically provide for adequate surface slopes away from all building structures. They shall also provide for the appropriate elevation of said structure as it may relate to ground water elevations and/or flood elevations from adjacent streams, ponds, detention basins, or street low points.

The location and configuration of downspouts and/or sump pump discharges shall be such that the runoff does not damage or inconvenience adjacent properties. In general, downspouts and sump pump discharge shall be directed towards the front or rear of the site and not at the adjacent site property lines. In no event shall downspouts, sump pumps, footing tiles, or any other surface or ground water source be discharged into the sanitary sewer system.

E. Controlled Discharge Required.

The runoff from any combined roof and pavement area over 5,000 square feet, or pavement area alone over 3,500 square feet, shall be controlled and managed in some manner, approved by the City Engineer, before it discharges to the City street or sewer system.

Single and duplex residential construction shall be exempt from the strict requirements of this paragraph. However, the runoff from said construction shall be controlled in a manner that minimized problems to adjacent properties.

F. Storm Sewers, Structures, Ditches, Swales, and Culverts

All storm sewers, structures, ditches, swales, and culverts shall be designed and constructed according to the requirements of the Standards and sound engineering practice. They shall be designed to safely convey the appropriate designed flows and to minimize maintenance and repair needs.

G. Retention Basins

Because of the predominant soil characteristics in the City of Valparaiso, retention basins are not allowed.

H. Detention Basins

Detention basins shall be required for any site proposed for development except individual single and duplex residential construction. The requirements for detention maybe waived by the City Engineer if provisions are made in the overall development for appropriate runoff management.

1. General

Detention basins shall be designed with a consideration for the welfare of the residents who live in the vicinity and the safety of those who might be attracted to the facility. Basins and their appurtenances shall be designed to require minimum maintenance. Slopes should be flat enough for safe walking and mowing. The areas designed for detention basins shall be designed to be used for other purposes such as recreation, man-made wetlands, open space, or other uses. The use of fences shall be kept to a minimum.

The designer is encouraged to make the facility as aesthetically pleasing as possible. Slopes should vary. Straight lines should be avoided. Long sweeping curves should be used to make the facility appear natural and part of the overall landscape. Basins should be landscaped with trees and shrubs appropriate to that location.

2. Storage Volume and Discharge Rate

Detention basins shall provide a storage volume adequate to contain the runoff from the developed site that results from a storm event with a 100-year frequency of recurrence. The discharge rate through the discharge control structure shall not exceed the runoff rate from the undeveloped site that results from a storm with a two (2)-year frequency of recurrence.

3. Dry Bottom Basins

Dry bottom basins shall be designed with adequate bottom slopes to minimize standing water after the stored runoff has been discharged. Underdrains may be required to provide additional drainage, particularly in the vicinity of the discharge control structure.

4. Wet Bottom Basins

Wet bottom basins shall be designed to provide a permanent water depth adequate to retard weed growth and to sustain aquatic life. They shall incorporate provisions for walkways around the perimeter of the pool to allow for recreational use and for access for weed control and emergency response. The ground slopes below pool level shall be sufficiently flat to allow an individual who falls in, to recover and walk from the water without great difficulty.

The design of this type of basin shall consider the need for shoreline bank protection from wave action and the need for a supplemental water supply for use during periods of low rainfall. Wet bottom basins generally present more difficult maintenance requirements than do the dry bottom basins.

These requirements include, but are not limited to, weed control, algae control possible wildlife management, erosion control at the shore line, and maintenance of the supplemental water supply equipment. The developer shall make adequate provision for these items.

5. Paved Area Basins

Paved areas such as parking lots may be used for detention basins where appropriate. The basins shall be designed so that the maximum stored water depth is not likely to cause damage to vehicles or adjacent property. Generally, the basin (s) should be located in the more remote areas of the lot and/or in the service drives if possible.

6. Underground Basins

Underground detention basins are permitted but should be used only when no other options are available. Underground basins shall be designed using vaults, pipe networks, or other means that allow access for inspection, cleaning, and/or maintenance. Storage of runoff in the voids of aggregate beds shall be avoided.

7. Discharge Control Structure and Overflow

Discharge Control Structures shall be designed to be safe, simple, and easily maintained. Their design shall be such that they are not subject to clogging with debris. They shall not rely on manual operation of valves or gates. Wherever possible they shall be designed to provide storage from the runoff generated by storm events with the greater frequencies of recurrence, as well as the "major storms (s)."

I. Renovation of Existing Developed Sites

There are certain sites in the City that were developed without providing appropriate drainage control measures. If any renovations or additions that require a building permit are proposed for these locations the applicant shall also provide reasonable drainage control measures appropriate for the site.

J. Erosion and Siltation

Wherever possible drainage control measure shall be designed to help control erosion and situation. Pass through runoff shall be diverted around the site to the greatest extent practical. Detention basins shall be undercut to provide sediment traps during the construction phase of the development. After the development is completed, the basins shall be cleaned and the ground surfaces brought to final grade.

605. Waiver from Requirements:

The Commission or the Board may grant waivers from the requirements of this Section, if, in their opinion, the granting of the waiver will not jeopardize public health, safety or welfare.

606. Appeal Process:

Any person or firm affected by the exercise of any discretionary authority delegated by this Ordinance to any official of the City of Valparaiso, Indiana, and who objects to the decision made or action taken by such official shall be entitled to a hearing before the Board of Public Works and Safety upon such objection.

The person or firm desiring such hearing shall file a written statement of his/her objections with the City Clerk-Treasurer. The person or firm making the objections shall be given notice of the time, place and date of said hearing at least ten (10) days before the hearing time. The person or firm objecting may waive the ten (10) day notice provision to facilitate the hearing process.

After hearing testimony of the objector and the official who made the decision or took the action objected to, the Board may confirm, revise, or modify and confirm as revised, or modify the

decision or action of the official in any manner consistent with the discretionary authority herein delegated by this Ordinance to that official.

Section 610 Requirements for Floodplains

General

1. Finding of Fact: The uncontrolled use of the flood plains and "water course" of the City of Valparaiso, Indiana, adversely affects the public health, safety, convenience and general welfare of that City. In addition, extraordinary public expenditures are required for the protection of person and property and for the relief of distress in areas subject to periodic flooding. Filling, construction, and certain other land use practices have been determined to be major contributors to such effects. The effects of a single fill or other project upon flood heights, velocities or floodplain storage areas may be relatively insignificant compared to the combined effects of a number of such projects which over a long period of time may drastically increase the flood hazard. Without a competent analysis of such projects, it is not possible to adequately ascertain the effects of each floodplain use upon subsequent development or the compatibility thereof with the long-range needs of the community.

2. Statement of Purpose:

To promote the public health, safety, and general welfare, to minimize flood losses in areas subject to flood hazards, and to promote wise use of the "floodplain," this floodplain zoning ordinance has been established with the following purposes intended:

- A. Prohibiting certain uses which are dangerous to life or property in time of flood
- B. Restricting uses which would be hazardous to the public health in time of flood
- C. Restricting uses, which are particularly susceptible to flood damage, so as to alleviate hardship and reduce demands for public expenditures for relief and protection.
- D. Requiring permitted floodplain uses, including public facilities, which serve such uses, to be protected against floods by providing "flood proofing" and general flood protection at the time of initial construction.

To protect floodplain occupants from a flood which is or may be caused by their own, or other, land use and which is or may be undertaken without full realization of the danger, through:

- A. Regulating the manner in which structures designed for human occupancy may be constructed so as to prevent danger to human life within such structure.
- B. Regulating the method of construction of water supply and sanitation systems so as to prevent disease, contamination and unsanitary conditions.
- C. Delineating and describing areas that could be inundated by floods so as to protect individuals from purchasing floodplain lands for purposes that are not, in fact, suitable.

To protect the public from the burden of extraordinary financial expenditures for flood control and relief by regulating all uses within the floodplain district so as to produce a method of construction and a pattern of development which will minimize the probability of damage to property and loss of life or injury to the inhabitants of the flood hazard areas.

To protect the "storage capacity" of floodplains and to assure retention of sufficient "floodway" areas to convey flood flows which can reasonably be expected to occur by:

- A. Regulating filling, dumping, dredging, and alteration of channels by deepening, widening, or relocating.
- B. Prohibiting unnecessary encroachments
- C. Encouraging uses such as agriculture, recreation and parking.

To protect the hydraulic characteristics of the small water courses including the gulches, sloughs, and artificial water channels use for conveying flood waters, which make up a portion of the urban major drainage system by:

- A. Regulating filling, dumping and channelization so as to maintain natural storage capacity and low flow characteristics.
- B. Prohibiting encroachment into the small water course to maintain their water carrying capacity.
- C. Encouraging uses such as greenbelt, open space, and recreation and riding trails.

Section 615 Floodplain Provisions

Compliance: No "structure" land or water, shall hereafter be used and no structure shall be located, extended, converted or structurally altered without full compliance with the terms of this ordinance and other applicable regulations.

Abrogation and Greater Restrictions: This ordinance supersedes provisions of any zoning ordinance relating to floodplains. However, any underlying zoning ordinance shall remain full force and effect to the extent that its provision are more restrictive.

It is not otherwise intended by this ordinance to repeal, abrogate, or impair any existing deed restrictions; however, where this ordinance imposes greater restrictions, the provision of this ordinance shall prevail.

Interpretation: In their interpretation and application, the provisions of this ordinance shall be held to be minimum requirements and shall be liberally construed in favor of the governing body and shall not be deemed a limitation of repeal of any other powers granted by Indiana Statutes.

Warning and Disclaimer of Liability: The degree of flood protection intended to be provided by this ordinance is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Larger floods may occur on occasions or the flood height may be increased by man-made or natural causes, such as ice jams and drainage openings restricted by debris. This ordinance does not imply that areas outside floodplain zoning district boundaries or land uses permitted within such district will always be totally free from flooding or flood damages. Nor shall this ordinance create a liability on the part of or a cause of action against the City of Valparaiso or any officer or employee thereof for any flood damages that may result for reliance on this ordinance.

Severability: If any section, clause, provision or portion of this ordinance is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected there.

Conflicting Provisions Repealed: All ordinances and/or parts of any ordinances in conflict with this ordinance are thereby and expressly repealed.

Section 620 ***Additional Definitions***

1. *Building – see “structure”*
2. *Development – any man-made change to improved or unimproved real estate including but not limited to:*
 - a. *construction, reconstruction, or placement of a building or any addition to a building;*
 - b. *installing a manufactured home on a site, preparing a site for a manufactured home or installing recreational vehicle on a site for more than 180 days;*
 - c. *installing utilities, erection of walls and fences, construction of roads, or similar projects;*
 - d. *construction of flood control structures such as levees, dikes, dams, channel improvements, etc.;*
 - e. *mining, dredging, filling, grading, excavation, or drilling operations;*
 - f. *construction and/or reconstruction of bridges or culverts;*
 - g. *storage of materials; or*
 - h. *any other activity that might change the direction, height, or velocity of flood or surface waters.*

“Development” does not include activities such as the maintenance of existing buildings and facilities such as painting, re-roofing; resurfacing roads; or gardening, plowing, and similar agricultural practices that do not involve filling, grading, excavation, or the construction of permanent buildings.
3. *Existing manufactured home park or subdivision – means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either the final site grading or the pouring of concrete pads) is completed before the effective date of this ordinance.*
4. *Expansion to an existing manufactured home park or subdivision – means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).*
5. *FBFM - Flood Boundary and Floodway Map*
6. *FEMA - Federal Emergency Management Agency*
7. *FHBM - Flood Hazard Boundary Map*
8. *FIRM - Flood Insurance Rate Map*
9. *Flood or Floodwater - the water of any lake or watercourse which is above the banks and/or outside the channel and banks of such watercourse.*
10. *Flood Hazard Areas - any floodplain, floodway, floodway fringe district or any combination thereof. (Refer to Drawing A Floodplain designation)*
11. *Floodplain – the channel proper and the areas adjoining any wetland, lake or watercourse which have been or hereafter may be covered by the regulatory flood. The floodplain includes both the floodway and the floodway fringe districts. (Refer to Drawing A - Floodplain designations).*

12. *Floodway* - the channel of a river or stream and those portions of the floodplains adjoining the channel which are reasonable required to efficiently carry and discharge the peak flood flow of the regulatory flood of any river or stream. (Refer to Drawing A).
13. *Floodway fringe* - the portions of the flood hazard area lying outside the floodway and within the 100-year flood boundaries (Refer to Drawing A).
14. *Flood Protection Grade* - (FPG) the elevation of the regulatory flood plus two feet at any given location in the SFHA. The lowest point is defined by the following: the lowest floor of the building (if a basement is included, the basement floor is the lowest floor), or the garage floor, if the garage is the lowest level of the building, or the first floor of a building elevated on pilings or constructed on a crawl space, or the floor level of any enclosure below an elevated building where the walls of the enclosure provide some resistance to the flow of flood waters; unless the wall are designed to automatically equalize hydrostatic flood forces on the walls by allowing for the entry and exit of flood waters, through providing a minimum of two openings (in addition to doorways and windows) having a total area of (1) square *inch* for every (*1*) square foot of enclosed floor areas subject to flooding. The bottom of all such openings shall be no higher than one foot above *grade*; or such enclosed space shall be suitable for nonresidential purposes and building access: or the level of protection provided to a nonresidential building below which the building is designed to be water tight. The design and construction shall be certified by a professional engineer registered under IC 25-31-1 or an architect registered under IC 25-4-1, as being adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the regulatory flood.
15. *Flood Proofed Building* - a commercial or industrial building designed to exclude floodwaters from the interior of that building. All such floodproofing shall be adequate to withstand the flood depths, pressure velocities, impact and uplift forces and other factors associated with the regulatory flood.
16. *IDNR* - the Indiana Department of Natural Resources
17. *LOMA* - Letter of Map Amendment; an amendment to the currently effective FEMA map that established a property is not located in a Special Flood Hazard Area. A LOMA is only issued by FEMA.
18. *LOMR* - Letter of Map Revision; an official revision of the current effective FEMA map. It is issued by FEMA and changes flood zones, delineations, and elevations.
19. *Lowest Floor* - means the lowest of: top of the basement floor, or top of the garage floor if the garage is the lowest level of the building; or the top of the first floor of buildings elevated on pilings or constructed on a crawl space with permanent openings or the top of the floor level of any enclosure below an elevated building where the walls of the enclosure provide any resistance to the flow of flood waters; unless the walls are designed to automatically equalize the hydrostatic flood forces on the walls by allowing for the entry and exit of flood waters, by providing a minimum of two openings (in addition to doorways and windows) having a total area of (1) square *inch* for every (*1*) square feet of enclosure area subject of flooding. The bottom of all such openings shall be no higher than one foot above grade. Such enclosed space shall be useable for the parking of vehicles and building access.
20. *Manufactured Home* - means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation, when connected to the required utilities. For floodplain management purposes the term "manufactured home" also includes *recreational vehicles*, park trailers, travel trailers, and

other similar vehicles placed on site for greater than 180 consecutive days. For insurance purposes the term "manufactured home" does not include *recreational vehicles*, park trailers, travel trailers, and other similar vehicles.

21. *Manufactured Home Standard* - proper installation using methods and practices that minimize flood damage. Manufactured homes must be elevated and anchored to resist floatation, collapse, or lateral movement. Anchoring can be accomplished by meeting one of the following:
 - a. compliance with minimum state standards for installation of manufactured homes as found in 675 IC 14-3 (Rule 3 of the Indiana One and Two Family Dwelling Code, current edition), or
 - b. compliance with the following specific standards; over the top ties be provided at each of the four corners of the manufactured home, with two additional ties per side at intermediate locations, with manufactured homes less than 50 feet long requiring only one additional tie per site; and frame ties be provided at each corner of the home, that five additional ties per side at intermediate points, and manufactured home less than 50 feet long requiring four additional ties per side; and all components of the anchoring system be capable of carrying a force of 4,800 pounds; and any additions to the manufactured home be similarly anchored.
22. *New manufactured home park or subdivision* – means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of this ordinance.
23. *Recreational vehicle* – means a vehicle which is (1) built on a single chassis; (2) 400 square feet or less when measured at the largest horizontal projections; (3) designed to be self-propelled or permanently towable by a light duty truck; and (4) designed primarily not for use as a permanent dwelling, but as quarters for recreational camping, travel, or seasonal use.
24. *Regulatory Flood* - the flood having a peak discharge which can be expected to be equal or exceed on the average of once in a one-hundred-year period, as calculated by a method and procedure which is acceptable to and approved by the IDNR. This flood is equivalent to a flood having a probability of occurrence of one percent in any given year. (Refer to Drawing A).
25. *Regulatory Flood Profile* - a longitudinal profile along the thread of a stream showing the maximum water surface elevation attained by the regulatory flood.
26. *Structure* - anything constructed or erected on the ground or attached to the ground *and is enclosed by walls and a roof*, including, but not limited to, buildings, factories, sheds, detached garages, cabins, manufactured homes, *prefabricated buildings, a gas or liquid storage tank, recreational vehicles*, to be placed on a site for more than 180 consecutive days, and other similar items.
27. *SFHA* - Special Flood Hazard Area; those lands within the jurisdiction of the City of Valparaiso that are subject to inundation by the regulatory flood. The SFHAs of the City of Valparaiso are generally identified as such on the Flood Insurance Rate Map of Valparaiso prepared by FEMA and dated *January 6, 1983*. The SFHA of those parts of unincorporated Porter County that are within the extraterritorial jurisdiction of the City of Valparaiso or that

may be annexed into the City of Valparaiso are generally identified as such on the Flood Insurance Rate Map prepared for Porter County by the FEMA and dated *April 1, 1982*.

28. *Substantial Modification* - any alteration, repair, enlargement or extension of an existing building. Such substantial modification is considered to occur when the first alteration of any wall, ceiling, floor, or to the structural element of the building commences. This term does not, however, include either; any project for improvement of a structure to comply with existing health, sanitary or safety code specifications or; any alteration of a structure listed on the National Register of Historic Places or the Indiana State Survey of Historic, Architectural, Archaeological and Cultural Sites, Structures, Districts and Objects.

Section 625 Districts

Basis for Establishing Districts

The floodplain district (areas subject to inundation by the regulatory flood) as identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for the City of Valparaiso, Indiana," dated July 6, 1982, with the accompanying Flood Insurance Rate Maps and Flood Boundary Maps dated January 6, 1983, along with any subsequent revisions to the text or maps are hereby adopted by reference and declared to be part of this ordinance. The Flood Insurance Study is on file at the Office of the City Engineer and the City Planning Office.

1. Floodway (FW) District: the purpose of the Floodway (FW) District is to guide development in areas identified as a floodway. The identification of *some floodways* have been made by the Federal Emergency Management Agency. IDNR exercises primary jurisdiction in the Floodway (FW) District under the provisions of *IC 14-28-1*, however, the Plan Commission may impose terms and conditions on any permit it issues in this district which are more restrictive than those imposed by IDNR. The Floodway (FW) District may stand by itself or be combined with any other district.
2. Floodway Fringe (FF) District: the purpose of the Floodway Fringe (FF) District is to guide development in areas subject to potential flood damage, but outside an identified Floodway (FW) District. The identification of some *floodway fringe* areas have been made by the Federal Emergency Management Agency. The Floodway Fringe (FF) District may stand by itself or be combined with any other district. The principal requirement of this district is that the flood protection grade of all buildings shall be at least two feet above the regulatory flood profile.

In the FW and FF districts established herein, the degree of flood protection established in this ordinance is considered reasonable for regulatory purposes and is based on engineering and scientific considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes such as ice or debris jams. This ordinance does not imply that areas outside flood hazard districts as defined herein, will be free of flooding or flood damage. This ordinance does not create any liability on the part of the City of Valparaiso, Indiana, the Plan Commission, IDNR, the State of Indiana, or any elected or appointed official or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

The regulatory flood elevation for each SFHA delineated as an "AH Zone or AO Zone shall be that elevation (or depth) delineated on the Flood Insurance Rate Map of the City of Valparaiso.

The regulatory flood elevation for each of the remaining SFHAs delineated as an A zone on the Flood Insurance Rate Map of the City of Valparaiso shall be according to the best data available as provided by IDNR. The regulatory flood elevation and floodway limits for the SFHAs *of those parts* of unincorporated Porter County that remain within the extraterritorial jurisdiction of the City of Valparaiso or that may be annexed into the City of Valparaiso shall be as delineated on the 100-year flood profiles in the Flood Insurance Study of Porter County dated *October 1, 1981* and the corresponding (*FBFM*) dated *April 2, 1982* and prepared by the Federal Emergency Management Agency.

If the SFHA is delineated as AH Zone or AO Zone, the elevation (or depth) will be delineated on the County Flood Insurance Rate Map. IF the SFHA is delineated as Zone A on the County Flood Insurance Rate Map, the regulatory flood elevation shall be according to the best data available as provided by he IDNR.

Section 626 Permitted Uses by Right (No Permit Required)

1. Floodway (FW) District

The following uses shall be allowable by right, provided they do not involve the erection of any structure or obstruction, the opening of any excavation or the depositing of any material or substance:

- A. agricultural uses such as the production of crops, pastures, orchards, plant nurseries, vineyards, truck farming, sod farming, wild crop harvesting, and general farming.
- B. Forestry, wildlife areas, and nature preserves
- C. Parks and recreational uses that require no construction or excavation, such as game farms, shooting preserves, target ranges, trap and skeet ranges, and hunting, fishing and hiking areas.

*Any use of floodway by public or private entities must be replaced equally with new floodway within the same watershed.

2. Floodway Fringe (FW) District

The following uses shall be allowable by right: all uses allowable by right in the Floodway District.

Section 627 Permitted Uses by Approval (Permit Required)

No person, firm, corporation, or governmental body not exempted by state law shall commence any “development” in the SFHA without first obtaining Permit for Construction in a Flood Hazard Area from the City. A Permit for Construction in a Flood Hazard Area, must be completed prior to issuance of the Building Permit. The City permit (s) may be issued only after all *required* IDNR permits and/or clearances have been obtained.

1. Floodway (FW) District

Type A Approval shall be required by the City of Valparaiso Floodplain Permit. All terms and conditions imposed by IDNR will be incorporated in any permit issued by the Building Commissioner. The Building Commissioner may impose greater restrictions.

All buildings or additions to existing buildings shall have flood protection grades at least two feet above the regulatory flood profile (Refer to Drawing A)

All electrical, heating, ventilation, plumbing, air condition equipment and other service facilities shall be *located at or above the flood protection grade. Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the FPG.*

The following uses may be permitted in the Floodway (FW) District only after a permit for construction in a floodway has been granted by IDNR:

- A. Water management use facilities, such as dams, docks, dolphins, channel improvements, dikes, jetties, groins, marinas, piers, wharves, levees, seawalls, floodwalls, weirs, and irrigation facilities.
- B. Transportation facilities, such as streets, bridges, roadway, fords, airports, pipe lines, railroads, and utility transmission facilities.
- C. Temporary or seasonal floodplain occupancy, such as circus sites, fair sites, carnival sites, boat ramps, camps, roadside stands, and transient amusement facility sites.
- D. Water-related urban uses such as wastewater treatment facilities, storm sewers, electric generating and transmission facilities, and water treatment facilities.
- E. Other flood tolerant or open space urban uses such as flood proofed buildings, race tracks, tennis courts, park buildings, outdoor theaters, fills, truck freight terminals, radio or TV towers, parking lots, mineral extraction and airport landing strips.
- F. Parks and recreational uses that might require minor construction or excavation such as golf courses, driving ranges, play areas, and fish hatcheries.
- G. Industrial-commercial uses such as loading areas, parking areas, airport landing strips and storage yards for equipment or machinery easily moved or not subject to flood damage.
- H. Utility facilities such as flowage areas, transmission lines, pipelines, water monitoring devices, roadway and bridges.

Flood proofing of non-residential structures, if proposed, must be in accordance with the definition of a flood proofed building as set forth in this ordinance and must be so certified by a professional engineer or a registered architect licensed to practice in Indiana.

The structure or structures, if permitted in the floodway, shall be constructed on the building site so as to minimize obstruction to the flow of floodwaters.

2. Floodway Fringe (FF) District

Type A Approval shall be required by the City of Valparaiso Floodplain Permit.

All electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities shall be *located at or above the flood protection grade. Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the FPG.*

The following use may be permitted in the Floodway Fringe (FF) District only after approval by the City Engineer's Office:

- A. All uses allowed in the Floodway District, and all facilities, structures, uses and buildings consistent with other provisions of this ordinance such as businesses, medical facilities, community and government buildings, industrial facilities, restaurants, commercial facilities, storage facilities, mobile homes, utility buildings, amusement facilities, residential buildings, and civic or fraternal facilities, may be constructed in this district provided that the flood protection grade for all buildings shall be at least two feet above the regulatory profile.
- B. *Manufactured* homes may be permitted provided that they have pads (concrete or stand of compacted fill) at or above the elevation of the regulatory flood and must be provided with ground anchors meeting *Manufactured* Home Tie Downs; Schedule A. In addition, adequate drainage and access for a hauler shall be provided.
- C. Flood proofed nonresidential buildings may also be constructed in this district provided that the plans and specifications for all necessary structural facilities and modifications are certified by a Professional Engineer or Registered architect licensed to practice in Indiana.
- D. Onsite waste disposal systems may be permitted provided that they are located so as to avoid impairment of them or contamination from them during the occurrence of the regulatory flood.

Section 635 Variances and Exceptions

Where the following conditions apply a Floodplain Permit, City of Valparaiso Form No. 6000-89 must be completed prior to issuance of the Building Permit. A Type C Approval shall be required.

1. The Board of Works and Safety may consider issuing a permit to vary from the terms and provisions of the Floodway (FW) or the Floodway Fringe (FF) Districts provided the applicant offers that:
 - A. there exists a good and sufficient cause for the requested variance
 - B. the strict application of the terms of this ordinance will constitute an exceptional hardship to the applicant.
 - C. the granting of the requested variance will not increase flood heights, create additional threats to public safety, cause additional public expense, create nuisances, cause fraud or victimization of the public or conflict with existing laws or ordinances.
2. The Board of Works and Safety may issue a permit to vary from the terms and provisions of the Floodway (FW) or the Floodway Fringe (FF) Districts subject to the following standards and conditions:
 - A. No permit for a residential use in a Floodway (FW) District may be granted.
 - B. Any permit granted in a Floodway (FW) District or FF will require a permit or clearance from IDNR.
 - C. Permit to vary from the flood protection grade requirements in a Floodway Fringe (FF) District may be granted only when a new structure is to be located on a lot one-half acre or less in size, contiguous to and surrounded by lots with existing structures constructed below the flood protection elevation.

- D. Permits may be granted for the reconstruction or restoration of any structure listed on the National Register of Historic Places or the Indiana State Survey of Historic, Architectural, Archaeological and Cultural Sites, Structures, Districts and Objects.
 - E. All permits shall give the minimum relief necessary, and be such that the maximum practical flood protection will be given to the proposed construction.
 - F. The Board of Public Works and Safety shall issue a written notice to the recipient of a permit that the proposed construction will be subject to increase risks to life and property and could require payment of excessive flood insurance premiums.
3. Structures Accessory to Open Uses permitted in Section 625 Permitted Uses By Right, of this Ordinance, whether temporary or permanent may be permitted only upon a determination by the Board of Public Works and Safety pursuant to a finding under the procedure required by Section 635 - Permitted Uses By Approval of this Ordinance that:
- A. Structures will not be designed for human habitation
 - B. Structures will have a low flood damage potential
 - C. The structure or structures, if permitted, will be constructed and placed on the building site so as to offer the minimum obstruction to the flow of flood water; wherever possible, structures will be constructed with the longitudinal axis parallel to the direction of flow of flood waters, and so far as practicable, structures will be placed so their longitudinal axis are approximately on the same line as those of adjoining structures.
 - D. Structures will be firmly anchored to prevent the structures or building from floating way and thus threatening to further restrict bridge openings and other restricted sections of the stream or river.
 - E. Service facilities such as electrical equipment will be at or above the flood protection elevation for the particular area.
4. Fills or Deposition or Materials may be permitted only upon a finding by the board of Public Works and Safety that:
- A. Any fill or deposition of material will comply with the Section 627 - Permitted Uses - By Approval of this Ordinance.
 - B. The fill or disposition of materials will have some beneficial purpose and the amount thereof will not be greater than is necessary to achieve that propose, as demonstrated by a plan submitted by the Owner, showing the final dimensions of the proposed fill or other material and the use to which the filled land will be put.
 - C. The fill or deposition of material does not imprudently reduce the flood storage capacity of the waterway unless a permit has been granted by the Board of Public Works and Safety and the other requirements of this section are met; and the fill or deposition of material does not encroach on that portion of the floodplain which would have significant and perceptible flow during the flood and which for that reason would help convey the flood waters. Any additional filling reduces the hydraulic capacity and required appropriate hydraulic studies and a review of the urban impact of such reduction.
 - D. The fill or other materials will be protected against erosion by rip-rap, strong vegetative cover or bulk-heading.

Section 645

Non-Conforming Uses

1. Any building structure or other use in a Floodway (FW) or Floodway Fringe (FF) District, which is not in conformance with this ordinance, constitutes a non-conforming use. The existing lawful use of a structure or premise which is not in conformity with the provisions of this ordinance may be continued subject to the following conditions:
 - A. In a FW District, no non-conforming use may be expanded or enlarged nor can a building undergo substantial modification without a permit for construction in floodway from IDNR.
 - B. In a FF District a building which constitute a non-conforming use may undergo substantial modification provided such modification is a *one-time-only* basis and further provided that *the cost of* such modification does not *equal or exceed 40 percent of the market value of the structure before the “start of construction” of the improvement* (excluding the value of the land) unless such *building is* permanently changed to a conforming use.

Any non-conforming use in the FF District, which is damaged by flood, fire, explosion, Act of God, or the public enemy may be restored to its original dimensions and conditions provided *the cost of restoration does not equal or exceed 40 percent of the market value of the structure (excluding the value of the land) before the damage occurred.*

Section 650 Permit Application

The owner or his agent shall make application on a Floodplain Permit application, City of Valparaiso Form No. 6000-89, in the Office of the City Engineer. The permit application shall be supplemented by any plans, specifications, or other information considered pertinent in the judgment of the Engineer or his representative. This information shall include the elevation of the top of the lowest floor (including basement) of all proposed development. Elevation should be in National Geodesic Vertical Datum of 1929 (NGVD) or North American Vertical Datum (NAVD). In either case the conversion formula should be included.

Section 655 Permit Fee

A permit fee shall be paid with the issuance of the Floodplain Permit. The amount of the permit fee shall be established by the Board of Public Works and Safety for determination and disposition.

Section 660 Administration

1. Procedures

- A. The City Engineer shall keep and maintain all records, including all lowest floor elevations, certificates, plans and other material associated with any permit or variance issued in a Floodway (FW) or Floodway fringe (FF) District. The City Engineer will maintain for public inspection and furnish upon request regulatory flood data, SFHA maps, Letters of Map Amendment (LOMA), Letters of Map Revision (LOMR), copies of DNR permits and letters of recommendation, federal permit documents, *DNR floodplain analysis and regulatory assessments*, and "as-builts" elevation and floodproofing data for all building constructed subject to this ordinance.
- B. The Building Commissioner shall not issue any permit or variance for the location or occupancy of any *manufactured* home in a FF District until such time as proper notice,

written on lease, deed or purchase contract, is given to the *manufactured* home owner that such *manufactured* home is in a flood hazard area.

- C. The City Engineer shall require the applicant to notify the Federal Insurance administration of all permits issued in the Floodway District concerning watercourse alteration. In addition to forwarding a copy of all such permits to FIA, the City Engineer shall require that maintenance is provided within the altered or relocated portion of said watercourse, so that the flood carrying capacity is not diminished.
- D. If the site is in an identified or suspected floodplain where the limits of the floodway and floodway fringe have not yet been determined, and the drainage area upstream of the site is GREATER than one square mile, the City Engineer shall require the applicant to forward the application, along with all pertinent plans and specifications to IDNR for review and comment.
- E. If the site is in an identified or suspected floodplain where the limits of the floodway and floodway fringe have not yet been determined, and the drainage area upstream of the site is LESS than one square mile, the City Engineer shall require the applicant to provide an engineering analysis showing the limits of the floodway, floodway fringe, and 100-year elevation for the site.
- F. The Building Commissioner shall review all applications for improvement location permits for new construction, additions to existing construction, or other development to ascertain as to whether the proposed construction, addition or development lies in a Flood hazard Area as defined by this ordinance. If the permit application lies in an identified Floodway District, then the Building Commissioner shall require the applicant to forward the application along with all pertinent plans and specifications to IDNR and apply for a Permit for Construction in a Floodway from IDNR. A local building permit may only be issued after receiving the proper permit or letter of recommendation from IDNR.
- G. If the site is in an identified floodplain where the limits have not yet been determined and the drainage area upstream is GREATER than one square mile, the Building Commissioner shall take no action until either a permit for construction in a floodway or a letter of recommendation approving the proposed development citing the 100-year flood elevation and the recommended Flood Protection Grade has been received from the IDNR. *Once* the Building Commissioner has received the proper permit *or floodplain analysis and regulatory assessment* approving the proposed development, a Building Permit may be issued provided the conditions of the Building Permit are not less restrictive than the conditions received from IDNR, and the provisions of all other or this ordinance are met.
- H. If the site is in an identified floodplain where the limits have not yet been determined and the drainage area upstream is LESS than one square mile, the Building Commissioner may issue the Local Improvement Location Permit, provided the City Engineer has approved the applicant's engineering analysis, and all other provisions of this ordinance have been met.
- I. If the permit application lies in a Floodway Fringe District, the Building Commissioner may issue a local building permit with the condition that the lowest floor, including basement of the structure (s) is at least two feet above the 100 year frequency flood elevation. In a Floodway district, Floodway fringe district, and Floodplain, the Building Commissioner may require such modifications to the design and material as the Building

Commissioner may deem appropriate to prevent flotation, collapse, or lateral movement of the structure and minimize potential future flood damages.

- J. In reviewing the application for improvement location permits for compliance with the requirements of this ordinance, the Building Commissioner shall require that all necessary permits from other State, federal, and local agencies have been obtained by the applicant.

The Building Commissioner may require the applicant to furnish such following additional information as is deemed necessary by the Board for the evaluation of the effects of the proposal upon flood flows and floodplain storage and to render a decision on the proposed floodplain use.

1. A typical valley cross section showing the channel of the stream, the floodplain adjoining each side of the channel, cross sectional area to be occupied by the proposed development, and high water information.
2. Plan (surface view) showing elevations or contours of the ground, pertinent structure, fill or storage elevations, size, location and spatial arrangement of all proposed and existing structure on the site, location and elevations of street, water supply, sanitary facilities, and soil types and other pertinent information.
3. Profile showing the slope of the bottom of the channel or thalweg of the stream.
4. Specifications for building construction and materials, flood proofing, filling, dredging, grading, channel improvement, storage of material, water supply and sanitary facilities.

2. Subdivision Control Ordinance

- A. The City Engineer shall review all proposed subdivisions to determine whether the subdivision lies in a Flood Hazard Area as defined by this ordinance. If the City Engineer finds the subdivision to be so located the Engineer shall require the applicant to forward pertinent plans and materials to the Indiana Department of Natural Resources for review and comment. The City Engineer shall require appropriate changes and modifications in order to assure that it is consistent with the need to minimize flood damages; all public utilities and facilities, such as sewer, gas, electrical and water systems shall be located and constructed to minimize or eliminate flood damage; adequate drainage shall be provided so as to reduce exposure to flood hazards; and that on site waste disposal system, if provided, shall be so located to avoid impairment of or contamination from them during the occurrence of the regulatory flood.
- B. All subdivision plats containing lands identified or suspected of being in flood prone areas shall have elevation of the 100-year flood listed thereon.

3. Standards Regarding Certain Utilities

All new or replacement water mains, valves and other appurtenances; and all new or replacement sewers, manholes and other appurtenances constructed or reconstructed in a Flood Hazard Area as defined by this ordinance shall be designed and constructed as to minimize or eliminate infiltration of floodwaters into these systems and discharges from these systems into floodwaters.

4. Manufactured Home Parks

All owners of manufactured home parks or subdivision located with the SFHA identified as Zone A on the community FHBM or FIRM shall develop an evacuation plan for those lots located in

the SFHA and file it with the local Plan Commission and have it filed with and approved by the appropriate community emergency management authorities.

5. Preventing Increased Damages

No development in the SFHA shall create a damaging or potentially damaging increase in flood heights or velocity or threat to public health and safety.

a. Within the floodway identified on the Flood Boundary and Floodway Map, the Flood Insurance Rate Map, or engineering analysis as provided in Section 660 the following standards shall apply:

- 1. No development shall be allowed which acting alone or in combination with existing or future development, will cause any increase in the elevation of the regulatory flood; and*
- 2. For all projects involving channel modifications of fill (including levees) the City of Valparaiso shall submit the data and request that FEMA revise the regulatory flood data.*

b. Within all SFHAs identified as A Zones (no 100 year flood elevation and/or floodway/floodway fringe delineation has been provided) the following standard shall apply:

- 1. The total cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the*

regulatory

flood elevation more than one-tenth (0.1) of one foot and will not increase flood damages or potential flood damages.

c. Public Health Standards in all SFHAs

- 1. No development in the SFHA shall include locating or storing chemicals, explosives, buoyant materials, flammable liquids, pollutants, or other hazardous or toxic materials below the Flood Protection Grade, unless such materials are stored in a flood-proofed storage tank or building constructed according to the requirements of Section 627 of this ordinance.*
- 2. New and replacement sanitary sewer lines and on-site waste disposal systems may be permitted providing all manholes or other above ground openings are located above the FPG, or those which are located below the FPG are watertight.*

6. Constructing on Fill

If otherwise permitted, a residential or nonresidential building may be constructed on a permanent landfill in accordance with the following:

a. The fill shall be placed in layers no greater than 1 foot deep before compacting 95% of

the maximum density obtainable with the Standard Proctor Test method.

b. The fill should extend at least ten feet beyond the foundation of the building before sloping below the FPG.

c. The fill shall be protected against erosion and scour during flooding by vegetative cover, riprap, or bulkheading. If vegetative cover is used, the slopes shall be no steeper than 3 horizontal to 1 vertical.

d. The fill shall not adversely affect the flow of surface drainage from or onto

neighboring properties.

7. Recreational Vehicles

Recreational vehicles placed on a site in the SFHA shall either:

- a. be on the site for less than 180 consecutive days, and;*
- b. be fully licensed and ready for highway use (defined as being on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions); or*
- c. meet the requirements for “manufactured homes” in Section 627.*

8. Building Protection

All areas below the FPG shall be constructed of materials resistant to flood damage.

9. Compensatory Storage

Whenever any portion of the SFHA is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the BFE shall be compensated for and balanced by an equivalent volume of excavation taken below the BFE. The excavation volume shall be at least equal to the volume of storage lost (replacement ratio 1 to 1) due to the fill or structure.

a.) The excavation shall take place in the floodplain and in the same immediate watershed

in which the authorized fill or structure is located;

- b.) Under certain circumstances, the excavation may be allowed to take place outside of but adjacent to the floodplain provided that the excavated volume will be below the regulatory flood elevation, will be in the same immediate watershed in which the authorized fill or structure is located, will be accessible to the regulatory floodwater, will not be subject to ponding when not inundated by floodwater, and that it shall not be refilled;*
- c.) The fill or structure shall not obstruct a drainage way leading to the floodplain;*
- d.) The fill or structure shall be of a material deemed stable enough to remain firm and in place during periods of flooding and shall include provisions to protect adjacent property owners against any increased runoff or drainage resulting from its placement; and,*
- e.) Plans depicting the areas to be excavated and filled shall be submitted prior to the actual start of construction or any site work; once site work is complete, but before the actual start of construction, the applicant shall provide to the Floodplain Administrator a certified survey of the excavation and fill sites demonstrating the fill and excavation comply with this article.*

Section 670 Certification of Compliance

No vacant land shall be occupied or used and no building hereafter erected, altered, or moved on the floodplains of any water course shall be occupied until a certificate of compliance or Occupancy Permit has been issued by the Building Commissioner.

The Building Commissioner shall request the applicant to submit a certification by a Registered Professional Engineer that the finished fill and building floor elevations, flood proofing

measures, or other flood protection factors were accomplished in compliance with the provisions of this ordinance. The Building Commissioner shall, within ten (10) days after receipt of such certification from the applicant, issue an Occupancy Permit only if the building or premises and the proposed use thereof conform to all the requirements of this ordinance.

Section 675 Enforcement and Penalties

Every structure, building, fill or development placed or maintained within any floodplain in violation of this ordinance is a public nuisance and the creation thereof may be enjoined and maintenance thereof may be abated by action at suit of the City of Valparaiso, the State or any citizen thereof. Any person who places or maintains any structure, building, fill or development within any floodplain in violation of this ordinance shall be punished as provided in the Municipal Code.

Section 680 Amendments

The City Council of the City of Valparaiso, Indiana, may from time to time, alter, supplement, or change the district boundaries and the regulations contained in this ordinance in the manner provided by law.

The City Council of the City Amendments to this ordinance may be made on petition of any interested party in accordance with the provisions of the Indiana Revised Statutes.